AMERICAN SOCIETY FOR TESTING MATERIALS

BULLETIN

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"Promotion of Knowledge of Materials of Engineering and Standardization of Specifications and Methods of Testing"

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William Hastings Bassett

1868-1934

THE sudden death on July 21 of the newly elected President of the Society, William Hastings Bassett, came as a grievous shock. While he had not been well for some months, and was resting under his physician's orders, his condition was improving and he expected confidently to assume his various duties later in the year. Tragically, he passed away only three weeks after he had assumed the A.S.T.M. presidency, an honor which by his long-time work in its behalf was richly merited. Death was very sudden, caused by an embolism.

In his death the Society has lost its leader and one of its most valued members—whether measured by the length of close association with its work, by the wisdom and helpfulness of his counsel, or by his sustained loyalty to its interests. Industry, particularly the non-ferrous metals field, has lost one of its most renowned technologists, one who rendered great service in developing its technical phases, indeed who was the pioneer in leading many of its advances. His many friends and associates lose one who was revered for his sincerity and straight forwardness, who accepted modestly the many honors conferred upon him.

W. H. BASSETT

William Hastings Bassett was born in New Bedford, Mass., on March 7, 1868, of old New England ancestry. He was educated in the New Bedford Public School and Swain Free School, graduating from Massachusetts Institute of Technology in 1891, with the degree, B.S. He then became chemist and soon superintendent with the Popes Island Manufacturing Co. After five years he became teacher of chemistry at Swain Free School, and in 1900 he became chief chemist of New Jersey Zinc Co. at their Newark works. In 1902 Mr. Bassett joined the Coe Brass Manufacturing Co. and began in 1903 his long service with the American Brass Co., first as chief chemist and metallurgist, in 1912 becoming technical superintendent and metallurgist and assuming his later office as metallurgical manager in 1930.

Mr. Bassett was a pioneer metallurgist in the brass industry. He did much to develop the high quality of refined copper and of zinc for making brass and other alloys. He was among the first in the United States to apply microscopy to the metallography of non-ferrous metals, and likewise the spectroscope to routine work in that industry.

Although his greatest work was done in copper and brass, he did hardly less notable work in other non-ferrous metals, resulting in a better understanding of their properties and effect of varying compositions. In 1925 he received the A.I.M.E. James Douglas Medal "for constructive research in copper and brass and other non-ferrous metals and their alloys and for his contributions to the establishment of the high standards of quality."

Mr. Bassett had been a member of A.S.T.M. since 1903. He participated actively in the work of a number of A.S.T.M. committees and with a keen interest in developing knowledge of the properties of non-ferrous metals, he supported actively many research and standardization projects. He was a leader in the organization in 1909 of the first two A.S.T.M. committees in the non-ferrous field, B-1 on Copper Wire and B-2 on Non-Ferrous Metals and Alloys. At the time of his death, he was a member of some sixteen Society committees. He was vice-chairman of Committees B-1 and B-2, secretary of D-14 on Screen Wire Cloth, chairman of the Coordinating Committee on Non-Ferrous Metals and Alloys, and chairman of the Joint Committee on Trolley Wire Specifications. He served as chairman of Committee E-4 on Metallography from 1917 to 1924. His unswerving fairness and willingness to cooperate made him an ideal member and officer. He served on the Executive Committee 1916 to 1918, and when he was elected President had completed a two-year term as Vice-President.

He was a past-president of the American Institute of Mining and Metallurgical Engineers (1930) and a former director of the American Institute of Chemical Engineers. He was chairman of the Non-Ferrous Metals Division of the Society of Automotive Engineers, and was a member of numerous other societies and clubs.

A side of Mr. Bassett's life known only to his close friends and associates was the way he gave himself so unselfishly in helping along his younger friends not only within his own organization, but also in his committee and society contacts. His friendly counsel and inspiration have helped many of those with whom he had contacts.

At the services, in Cheshire, Conn., Mr. Bassett's home, a most appropriate eulogy was given . . . . "He was a man of parts—of a fine mind, a well-balanced judg-

ment, and an ample fund of common sense. A great man has fallen.

"A prince has fallen. William Hastings Bassett was a prince of a man. We esteemed him for that reason—esteemed him not so much for his ability as for his nobility. His greatest achievement was not in metals, but in character. He held his integrity firm in his clutch and 'never sold the truth to serve the hour.' He was an honorable man—high principled, broad-minded, large hearted, and kindly affectioned."

He was called while yet in the full power of his great activities, in full sympathy with the duties of his life and love for his family, friends and associates. To say that one who combined a noble devotion to duty and lovable traits of helpfulness, thoughtfulness, and loyalty will be sorely missed is hardly adequate. The officers and members of this Society have been immeasurably saddened by the passing of one who was endeared to them. Their heartfelt sympathies are extended to his family, his widow, their daughter and son, with the hope that from his rich life of service consolation may be drawn.

The character and personality of William Hastings Bassett have left an impress upon the Society which cannot be erased.

In view of the death of President Bassett, Dr. Hermann von Schrenk, Consulting Timber Engineer, St. Louis, Mo., as senior vice-president, will assume temporarily the duties of the presidency.

U. S. Science Advisory Board

Because the work of the Federal Science Advisory Board may be of interest to many members of the Society, a statement outlining its work was requested from this body.

The Science Advisory Board was appointed by President Roosevelt in an Executive Order, to advise the departments of the Federal Government on scientific matters. An unusual number of new problems having an important bearing upon the organization and progress of the scientific work of the Government had arisen in connection with the effort of the administration to meet the economic emergency. The administration felt the need for special advice upon the improvement and proper functioning of the scientific services most deeply involved in these problems and the Science Advisory Board was appointed to meet this need.

The Executive Order placed upon the National Academy of Sciences and the National Research Council the responsibility for the Board's operations. The Board consists of the following members:

Karl T. Compton, *Chairman*, President, Massachusetts Institute of Technology.
W. W. Campbell, President, National Academy of Sciences.
Isaiah Bowman, Chairman, National Reserach Council.
Gano Dunn, President, J. G. White Engineering Corp.
Frank B. Jewett, Vice-President, American Telephone and Telegraph Co.
Charles F. Kettering, Vice-President, General Motors Corp.
C. K. Leith, Professor of Geology, University of Wisconsin.
John C. Merriam, President, Carnegie Institution of Washington.
R. A. Millikan, Director, Norman Bridge Laboratory of Physics; and Chairman, Executive Council, California Institute of Technology.

The Board has been requested by the Government to report upon a considerable number of problems, among them the development of the program of the Weather Bureau, the coordination of statistics of the mineral resources of the country, the functioning of the U. S. Geological Survey and the Bureau of Mines, and the development of a coordinated research program by the railroad systems of the country.

More Student Membership Prize Awards Established

As a result of the interest of four members of the Society, a number of additional student membership prize awards have been established at four schools, Rensselaer Polytechnic Institute, Detroit Institute of Technology, Grove City College, and the University of Kansas. These awards are sponsored respectively by Past-Presidents T. R. Lawson and F. O. Clements, and Messrs. A. E. Pew, Vice-President, Sun Oil Co., and Walter Bohnstengel, Assistant Engineer of Tests, Atchison, Topeka and Santa Fé Railroad.

This plan of establishing student memberships in the Society as prize awards was started in the fall of 1932. In all cases the awards are underwritten by members of the Society who desire to bring A.S.T.M. activities directly to the attention of engineering students, at the same time combining with this substantial recognition of the achievements of outstanding students.

In addition to the schools mentioned above, prize awards are in effect at Cornell, Massachusetts Institute of Technology, and the University of Pennsylvania. While the basis of the awards varies somewhat, they are, in general, awarded to students who have done meritorious work in courses involving study of materials of engineering including laboratory courses. The awards so far made have resulted in interesting a number of deserving students in the work of the Society and, at the same time, the plan has made available to the winners the publications and material which student members receive, including special compilations of standards, A.S.T.M. BULLETIN and as many of the preprinted technical reports and papers as the student desires.

Student membership is of far more value than is indicated by the dues, $1.50, which is the only fee, and it means much to the Society to have young engineers acquainted with A.S.T.M. work, and how helpful it can be both in his undergraduate days and later in industry.

The faculty members who have put the plans in effect in the various schools have been extremely pleased that awards were established in their institutions. It is hoped that a number of other prize awards can be established at other schools not now represented. Any of the members who wish to sponsor awards may obtain further information by writing to the Secretary-Treasurer. If a member wishes Society headquarters to make contacts with a particular school, this will be done gladly.

W. H. Fulweiler Elected I.A.T.M. Officer

Past-President W. H. Fulweiler, Chemical Engineer, United Gas Improvement Co., Philadelphia, has been elected vice-president of the International Association for Testing Materials. Mr. Fulweiler has been interested in the work of this body for a number of years and is now serving as American Member of the Permanent Committee. The Society maintains affiliated relations with I.A.T.M. through its membership as a body. A recent activity of the association is the forming of international study commissions to exchange information on properties of engineering materials and phases of testing.

Interesting Papers, Committee Activities, Mark 1934 Meeting

Indications at Meeting Point to Increased Impetus in Research and Standardization Programs

THE Society's annual meetings are always marked with outstanding technical papers and reports and this year was no exception. Another feature of the five-day meeting was the large number of committee meetings held, at practically all of which there was recorded considerably increased attendance over that of the past few years.

Fifteen formal sessions were held at which 48 committee reports were presented, including four informal reports and 45 technical papers. Most of the items were printed in advance of the meeting and distributed to the members who requested preprints. Some idea of the material preprinted can be gained from the fact that it comprised a total of 1080 pages. A number of members commented on the interesting and pertinent discussion that was presented.

The results of standardization actions taken are recorded in tabular form at the bottom of page 8. This indicates that 32 proposed standards will be shortly published as A.S.T.M. tentative standards and 36 existing tentative specifications and test methods were recommended for adoption as standard.

Upwards of 175 committee meetings were held throughout the week. Many of the committees laid plans for a continuation of the extensive projects under way and a number of new investigations were authorized and preliminary work initiated. Some idea of the standardization work immediately confronting a number of the committees can be had by a review of the article appearing on page 11.

The total registration for the week was 823 which included 722 A.S.T.M. members and 101 visitors. A large number of the members brought their families with them and 123 ladies registered, this figure not being included in the total just mentioned. The total registration, members plus visitors, at the 1932 meeting in Atlantic City was 674, while in Chicago in 1933 the figure was 703. It was announced that the 1935 annual meeting would be held in Detroit, June 24 to 28 at which time the Third Exhibit of Testing Apparatus and Equipment also will be sponsored.

New Vice-President

H. S. VASSAR

Technical Papers in Metals Field

It is extremely difficult to single out technical papers which aroused most interest. Very few annual meetings have had programs exceeding in interest and value the papers presented at this year's meeting.

As customary, a number of papers discussed interesting problems in the metals field. An indication of the valuable data developed by extensive research at the National Bureau of Standards on soil corrosion affecting pipe lines stressed the control which soils exert on corrosion of existing pipe lines. In another paper involving corrosion, it was indicated that in general the type of finish is not an important consideration as regards initial corrosion of steel under water at low velocities of flow, but is important at high velocities, this conclusion being based on a relatively short period of immersion.

In the non-ferrous field, the question has been raised on many occasions as to whether properties of commercial diecastings approximate those of test specimens cast to size. An extensive investigation described at the meeting indicated that so far as impact strength is concerned, close agreement does exist. In a discussion on "Some Factors Affecting Strain Measurements in Tests of Metals," the author concluded that considerable variations in strain and stress are to be anticipated in tension and compression specimens, even when using careful technique and good apparatus, but it is essential that the specimen be loaded uniformly with axial loading.

In the high-temperature field a well-received paper was presented on "The Interpretation of Creep Tests" in which examples were given to show how under suitable conditions creep data may be correlated. Granting all the objections to extrapolation, it may be looked upon as a necessary evil, since if tests are to have design value, extrapolation must be done, with in some instances a time ratio as great as 100 to 1.

There was an interesting discussion of creep properties of 5 per cent chromium and ½ per cent molybdenum steel tubes involving effect of carbon content, heat treatment and variation of directional properties resulting from working during fabrication. Increase in carbon content from 0.139 to 0.181 per cent in a 4 to 6 per cent chromium, 0.50 per cent molybdenum steel increased the physical properties and creep resistance materially.

The embrittlement of 4 to 6 per cent chromium steel especially when used in heater tubes in oil refineries was described. Normal failure of this steel in refinery use seems to be accompanied by creep with visible swelling and most heats show a high degree of susceptibility to temper brittleness which may often be revealed by a drop in impact value with only a negligible increase in tensile strength or hardness.

Papers on Paints, Gasoline, Rubber

A complete session of the meeting was devoted to papers and reports on paints and naval stores and a good deal of interest was aroused by the discussion on tinting strength in which three formal papers were presented. It was indicated that the best justification for the use of a tinting strength test as a measure of white pigment quality or uniformity is the ease and speed of conducting it as a routine, and in the case of white pigments, its value lies chiefly in determining uniformity of successive shipments of the material.

The subject of specification limits to insure gasoline quality with respect to vapor lock was discussed in two formal papers presented at the meeting, with considerable additional discussion presented by authorities in this field.

Four papers at the meeting were given on developments in the rubber products field. It was indicated that significant changes occurring during immersion of rubber and like materials in oil affect its flexibility, toughness, and surface

disintegration, and since these changes are evaluated by superficial examination rather than by mechanical tests, it is important to develop observation and manual tests to supplement machine tests.

In a paper evaluating raw materials for rubber compounds, physical and chemical properties of zinc oxide and carbon-black especially were described and a number of impurities were discussed with explanations concerning their undesirability. Rubber compounds used in structural engineering models were covered in another paper, indicating that the main difficulty to be overcome lies in the discovery of a filler or fillers which will permit heavy loading of the compound without impairing its elastic qualities.

Fire Tests, Masonry Construction, Highway Materials

Based on a very extensive investigation made to evaluate laboratory tests for determining the value of fire-retardant treatments for wood, four offered sufficient promise to warrant detailed investigation, including the shavings, crib, timber and fire tube tests. The crib test seemed the best single test, while the shavings test was found the most unsatisfactory of the four studied in detail.

Two interesting papers reported results of studies on various brick and mortar combinations. In one involving permeability tests of brick wallettes the most water-tight walls were obtained with smooth impervious bricks set dry and smooth porous bricks set wet (15 minutes total immersion). An examination of cracking that occurred in panels of brick work in 38 buildings indicated that the rate of absorption of brick is important and best results were obtained where this was moderate, not high or low. High-lime content in mortars reduced the amount of separation cracking and a combination of brick with a low or moderate rate of absorption and a mortar with a high-lime percentage consistently produced the best results.

The de-airing process of clay-products manufacture was reviewed and it was pointed out that results to date from different manufacturers showed striking improvement in quality, including higher specific gravity, higher modulus of rupture, lower absorption and higher crushing strength.

A very extensive paper on "Subgrade Soil Testing Methods" was presented. Various types of soils were outlined and there were indicated some of the present testing methods that have been developed to assist in stabilizing highway materials. At the present time, 26 states rely in varying degrees on subgrade properties as determining factors in the design of roads and pavements. A new subcommittee of the Society has been established to study subgrade soils.

A 14-ft. diameter circular track was described in which pavement sections were laid and then subjected either to the action of a roller or to a pneumatic tired wheel which may be equipped with tire chains. This test was developed to answer the needs of a practical service test and a number of results given by the authors indicate the versatility of the machine.

Cement, Concrete

Of particular interest to the cement field was an unusually extensive and important paper covering a study of over 130 cement compositions in relation to strength, volume change, resistance to sulfate water, etc. Results revealed that mortar and concrete properties are markedly influenced by the composition of the cement compounds. The effects of four major compounds were discussed.

A further progress report on "Plastic Flow of Concrete Under Sustained Stress," investigations of which have been in progress for a number of years at the University of California, indicated that due to plastic flow or time-yield there may be a marked redistribution of stress between concrete and steel in the case of reinforced concrete columns. The authors believe that the major portion of plastic flow in concrete under sustained compressive stress is due to the separation of colloidal water from the cement gel.

As a result of an investigation on the "Effect of Duration of Moist Curing on the Principal Properties of Concrete" it was pointed out that typical water-cement ratio - strength curves for moist-cured concrete were obtained regardless of the type of cement or test age. In another paper of interest to the highway field, there was discussed a modified cube method of making compression tests on portions of concrete beams from flexure tests.

Dudley Medalist

R. L. TEMPLIN

Testing Apparatus

Among the papers dealing with the development and application of new testing apparatus were descriptions of a suspension turbidimeter for determining specific surface of granular materials, the use of which does not involve Stokes' law; a vane calorimeter for measuring the heat of hydration of neat-cement pastes while curing; a portable instrument for testing indentation of asphalt tile; a high speed fatigue testing machine and a tensometer utilizing a vibrating wire.

Interesting Committee Reports

A number of very interesting committee reports were presented at the meeting. Special mention should be made of the report on quality standards for wrought iron, prepared by Committee A-2, and the report on the service characteristics of light metals and alloys, compiled by Committee B-7. The former is designed to bring about a better understanding of wrought iron with respect to its underlying characteristics, meaning of test results and the various factors by which quality is judged. The B-7 report has as its aim to provide the engineering profession with authoritative data and information on aluminum, manganese and alloys covering metallurgical characteristics, industrial requirements, physical and chemical properties, compositions, etc.

Interesting and important discussions of both standardization and research work in their charge were given in the reports of two committees on corrosion—A-5 and B-3—die-cast metals and alloys, lime, preservative coatings, rubber products, electrical insulating materials, refractories, cement, concrete, concrete pipe, road and paving materials, waterproofing and roofing materials, and textiles.

General Session

On Wednesday evening a session was devoted to the President's annual address, the Award of the Dudley Medal and reception to new officers. Some of the points stressed by President Lawson in his address are outlined below.

(*Concluded on Page 8*)

NEW MEMBERS OF EXECUTIVE COMMITTEE

J. B. RATHER H. J. BALL L. S. MARSH H. A. ANDERSON W. M. BARR

New Officers

THE recent election of officers, as announced at the annual meeting, resulted in the unaminous election of William H. Bassett as President (1934–1935), H. S. Vassar as Vice-President (1934–1936) and the following as members of the Executive Committee (1934–1936): H. A. Anderson, H. J. Ball, W. M. Barr, L. S. Marsh, and J. B. Rather.

WILLIAM HASTINGS BASSETT

1868-1934

Member Executive Committee, 1916-1918.

Vice-President, 1932-1934.

President, June, 1934.

Died July 21, 1934.

Vice-President

H. S. Vassar, newly elected Vice-President is Laboratory Engineer, Public Service Electric and Gas Co., Irvington, N. J. Mr. Vassar graduated from Pratt Institute in 1903. He then was engaged in the engineering and operating departments of the company of whose testing laboratory he is now in charge. He is completing a term as a member of the A.S.T.M. Executive Committee and is active in the work of A.S.T.M. Committee D-9 on Electrical Insulating Materials (chairman, 1926 to 1930) and D-11 on Rubber Products.

Members of Executive Committee

H. A. Anderson, Metallurgical Engineer, Western Electric Co., Hawthorne Works, Chicago, Ill., is a graduate of Northwestern University (B.S., 1915; C.E., 1916). He was assistant engineer, rails and ties, Southern Pacific Railroad, 1916 to 1917; assistant engineer-physicist, National Bureau of Standards, 1917 to 1919; engineer of tests, U. S. Naval Aircraft Factory, Philadelphia, 1919 to 1920; and since 1921 has been with the Bell Telephone Laboratories, and in his present position. He is chairman of A.S.T.M. Committee B-6 on Die Cast Metals and Alloys.

H. J. Ball, Professor of Textile Engineering, Lowell Textile Institute, Lowell, Mass., graduated from Massachusetts Institute of Technology (B.S., 1906). He was instructor at Lowell Textile Institute until 1918, when he was appointed to his present position. Active in the work of Committee D-13 for many years, he has been chairman since 1930. Professor Ball is also chairman of the Committee on Testing Methods Research of the U. S. Institute for Textile Research.

W. M. Barr, Assistant to Executive Vice-President, Union Pacific Railroad Co., Omaha, Nebr., is a graduate of the following universities: Iowa, 1902, B.S.C.; Grinnell, 1904, M.A.; Pennsylvania, 1908, Ph.D. He has been chemist, U. S. Geological Survey; instructor in chemistry, University of Iowa and University of Pennsylvania; professor of engineering chemistry, Iowa State College; manager, Eastern Works, Mallinckrodt Chemical Works and since 1916 with the Union Pacific System, first as consulting chemist and at present in charge of laboratories, water supply, inspection and tests.

L. S. Marsh, Manager, Department of Inspection and Metallurgy, Inland Steel Co., Chicago, Ill., received his technical training at the University of Michigan. He then became chemist (1902) for the Illinois Malleable Iron Co. Later he was chemist and chief inspector, Rock Island Railroad Co., and after several years' service was appointed engineer of tests of the Bureau of Engineering, City of Chicago. In 1922 he became inspecting engineer, Inland Steel Co. Mr. Marsh is president of the Association of American Steel Manufacturers' Technical Committees.

J. B. Rather, In Charge, General Laboratories, Socony-Vacuum Corp., New York City, is a graduate of the Agricultural and Mechanical College of Texas (B.S., 1907; M.S., 1911) and Johns Hopkins (A.M., 1915). He has been assistant state chemist, Texas; assistant chemist, Texas Experiment Station; professor of agricultural chemistry and chemist, Experiment Station, University of Arkansas; chief chemist, 1919 to 1932, Standard Oil Company of New York, and since then in his present connection.

American Society for Testing Materials

BULLETIN

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Number 69 July 31, 1934

A.S.T.M. Committees

NO one attending the recent annual meeting of the Society could fail to be impressed by the tremendous committee activity in evidence. Some 175 committee meetings were held, most of them very well attended. The hard work of these groups has been the basis of the Society's accomplishments for over 30 years—and the standing committees continue to be the very heart of A.S.T.M.

It is difficult to evaluate their work in concrete terms—for who can estimate the worth to the thousands of individuals and companies who have found in A.S.T.M. committee reports greatly needed, and above all authoritative, data and information on important engineering materials problems. From the first report presented in 1899 by the first A.S.T.M. committee on "The Present Knowledge of Impact Tests" (prepared by the committee personnel—Professors W. K. Hatt and Edgar Marburg) to the many reports presented in 1934, there has been a continuous and ever increasing stream of authoritative knowledge relating to materials.

The efforts expended in some of the research projects are very great, which of itself is an indication of the importance the individual committee members attach to this work. Thousands of tests must be made, specimens examined, results tabulated and digested.

To state that over 700 standard specifications and test methods have been issued by A.S.T.M. committees does not make evident the importance of this work unless some mention is made of their extensive use. That these standards are the established basis for the purchase of many millions of dollars worth of materials annually, does indicate, however, the value placed on them by industry.

The continued success of A.S.T.M., in its prescribed field of materials standardization and research, has been earned largely by its committees. The outstanding accomplishments of each committee are due to the consistent work, full cooperation and splendid spirit of unselfishness displayed by the individual members and the committee officers chosen by them to direct their work.

Cooperation in Membership Work

EXCELLENT cooperation on the part of the members of the Society has helped in keeping the "new members' curve" on the upgrade. The results for the first quarter of the year showed a net increase in A.S.T.M. membership for the first time in two years, and the second quarter was even more encouraging. A list of new members appears on page 12.

During the year the Membership Committee, headed by K. B. Cook, has been active, and their plan of enlisting the support of a still larger group—particularly in following up prospective members—has met with encouraging results.

Suggestions of individuals and companies who undoubtedly should find it helpful to become affiliated with A.S.T.M. are being received constantly. Every member can help in this work and all are urged to do so. Among associates and business acquaintances there are surely a number of individuals who should be affiliated with the Society.

It is quite essential that new members be obtained, so that through the increased support, needed new work can be started and research and standardization work in process be given additional impetus; the resulting wider spread of knowledge about A.S.T.M. is extremely valuable; and a greater number of members adds value to each existing membership for it means more extensive publications and more information on new fields of work.

Members Responsible for New Members

Following a suggestion that from time to time a list appear in the BULLETIN of those who have obtained another A.S.T.M. member, the following are recorded as having "got their man."

Ernest Ashton
James Aston
Hyman Bornstein
Arthur W. Carpenter
Cloyd M. Chapman
K. B. Cook
I. H. Cowdrey
D. E. Douty
M. S. Evans
H. G. Farmer
A. C. Fieldner
T. A. Fitch
P. J. Freeman
H. A. Gardner
W. A. Hamor
J. W. Harsch
C. L. Hippensteel
G. E. Hopkins
A. J. Kraemer
Inge Lyse
J. T. MacKenzie
F. R. McMillan
M. Rea Paul
W. G. Schneider
C. H. Scholer
W. R. Shimer
E. A. Snyder
R. W. Steigerwalt
Bradley Stoughton
T. S. Taylor
M. H. Ulman
Ephrem Viens
W. C. Voss
W. H. Whitcomb
G. H. Woodroffe

Sooner or later, the names of other members who are cooperating with the Membership Committee by following up prospects will appear in supplements to the above list. It is hoped many other members will soon qualify for listing.

1934 Year Book Sent on Request

All members of the Society who wish to obtain a copy of the 1934 Year Book (now in preparation) should return promptly the enclosed request card. Copies will be sent only on request.

As customary, the 1934 edition will contain the complete membership list. The committee section, listing the full personnel and officers of all A.S.T.M. standing committees will be included, as well as the By-laws, Regulations Governing Standing Committees, Society representatives, etc.

Matters Referred to Letter Ballot

By action of the annual meeting 48 recommendations from the standing committees affecting standards and tentative standards were referred to letter ballot of the membership. The 48 recommendations which involve Society standardization work comprise 36 tentative standards proposed for adoption as standards and revisions of 12 existing standards. A complete list of the items to be voted upon appears in the letter ballot enclosed with this BULLETIN. Detailed information concerning all matters referred to letter ballot is given in the committee reports issued in preprint form to the membership in advance of the meeting. The accompanying Summary of the Proceedings contains a record of the actions taken at the annual meeting and includes particularly the changes in or additions to the committee reports as preprinted.

All members in good standing are urged to execute the enclosed ballot and vote on the matters on which they feel technically qualified to pass judgment.

Student Testing Society at New York University

Through the efforts of Prof. Carl T. Schwarze, New York University, who has been a member of A.S.T.M. for many years, a student society for testing materials has been organized. This group, officially recognized by the N.Y.U. Student Council, has held several meetings during the year, at one of which Dr. C. D. Hocker, Chemical Engineer, Bell Telephone Laboratories, Inc., presented a lecture on "The Outdoor Weathering of Metals and Metallic Coatings" based on the symposium on this subject held in Washington in March.

To provide close contact with A.S.T.M., the student organization requires that its four officers be members of the Society. This rule makes it possible for the student society to have information from the A.S.T.M. publications brought to them.

Other active members of the Society in the New York area have been interested in this student organization, particularly T. A. Wright of Lucius Pitkin, Inc., and it is expected that during the next term there will be lectures presented by him and his associates, and other members, designed to give the students a knowledge of the various phases of A.S.T.M. activity and the wide and practical applications of the results of the committee work, etc.

This method of gathering together interested students to broaden their practical knowledge of materials problems may suggest possibilities for similar groups in other schools.

New Sustaining Members

The Atlantic Refining Co., Philadelphia, has become a Sustaining Member of the Society, effective on January 1, 1934, and the General Motors Corporation will assume this class of membership for 1935. Other Sustaining Members include Bell Telephone Laboratories, Socony-Vacuum Corp., Universal Atlas Cement Co., Sun Oil Co., Western Electric Co. and The Texas Company.

This class of membership was created in 1931 to enable members to increase their support of Society work to a degree more nearly commensurate with its intrinsic value to them. The annual dues are $100 and each of these members receives a complete set of all publications, both regular and special, issued by the Society.

1935 Meeting and Exhibit in Detroit

The A.S.T.M. annual meeting for 1935 will be held in Detroit during the last week of June, this decision having been reached by the Executive Committee at its last meeting. Further, the Third Exhibit of Testing Apparatus and Related Equipment will be held concurrently with the meeting. The first regional meeting ever held by the Society was in Detroit, March, 1930, and in 1932 the Detroit District Committee headed by Past-President F. O. Clements, sponsored a very successful local meeting and technical program.

The policy with respect to annual meetings is to hold meetings alternately in the East and in some mid-west industrial center. Exhibits, sponsored by A.S.T.M., featuring testing instruments, machines and related equipment, and research apparatus are held in conjunction with the annual meeting in the odd years. Successful exhibits, stressing apparatus developments in the fields of work in which A.S.T.M. is active, were held in Chicago in 1931 and 1933.

International Work on Testing Emulsions

International cooperative work has been inaugurated recently on the testing of emulsions. This work grew out of the 1933 World Petroleum Congress held in England, in which a number of papers were given and discussed on methods of testing bituminous emulsions. Discussion by the various interested parties brought out the possibility and desirability of international work on standardizing test methods, and as the result of an invitation to cooperate in the work, the A.S.T.M. is taking an active part through its Committee D-4 on Road and Paving Materials, immediate jurisdiction of the work being in the province of Subcommittee B-17 on Emulsion Tests, headed by Mr. J. S. Miller, Jr., of the Barber Asphalt Co.

Col. E. G. Wace, Chairman of the Roads Emulsion and Cold Bituminous Roads Association, Ltd., of England, has taken a leading part in the work. He recently forwarded a sample of a bituminous emulsion, with an outline of the tests to be used, to those participating.

The tests to be conducted upon the sample cover the following properties: water content; homogeneity or spraying quality; viscosity (Engler); lability in use; and resistance to low temperatures. The samples received here have been tested by two members of Subcommittee B-17 and it is expected that a compilation of the results obtained by the various cooperators will prove of considerable interest.

Tests included in specifications for emulsified asphalt being submitted to the Society for approval as tentative, involve viscosity (Saybolt); residue by distillation; settlement (5 days); demulsibility; sieve test (homogeneity or spraying quality); stone coating test; tests on residue by distillation: penetration at 25 C., solubility in CS_2, ash, ductility at 25 C., specific gravity at 25 C.

Further announcements of this international cooperation work will be made as developments occur.

Discussion of Meeting Papers

Written discussion of the papers and reports presented at the 1934 annual meeting will be received by the Committee on Papers and Publications until September 1. All who plan to submit discussion are urged to send it to Society Headquarters as far in advance of the closing date as possible in order to facilitate the preparation of the material for the *Proceedings*.

1934 Annual Meeting

(*Continued from Page 4*)

The Eighth Award of the Charles B. Dudley Medal was made to R. L. Templin, Chief Engineer of Tests, Aluminum Company of America, for his outstanding paper presented at the 1933 meeting on "The Fatigue Properties of Light Metals and Alloys." In presenting Mr. Templin to the President, Prof. C. H. Mathewson, Yale University, indicated the regularity with which Mr. Templin appeared on the A.S.T.M. program and how valuable have been his contributions in addition to his winning paper of last year.

The report of the tellers, Prof. H. F. Moore and J. B. Young, appointed to canvass the ballot on election of officers, pointed out that as a result of the 710 ballots cast, the officers were unanimously elected.

President's Address

In his annual address the retiring president, T. R. Lawson, reviewed the growth of the Society, including its committee and other activities from its beginning as an American Section of the International Association in 1898 and its formal incorporation in 1902. At the present time, there are 56 standing and research committees and if the joint committees and sectional committees are included, the number reaches 77. The personnel has grown from the original two in 1898 to over 2650 at the end of last year. Eliminating duplication, the number of individuals engaged in committee work is about 1400.

He pointed out that consolidation of our standardization activities was essential and that further development of inter-Society relations was extremely desirable both individually and through such agencies as the American Standards Association, to the end that the Society will be looked upon to an increasing extent as the established authority in matters concerning properties of and standards for engineering materials.

Edgar Marburg Lecture

The Ninth Edgar Marburg Lecture was delivered by S. T. Powell, Consulting Engineer, Baltimore, on the subject "Water as an Engineering and Industrial Material." He indicated that "where broad specifications are acceptable, as in the majority of usages, no particular difficulty may be experienced. For the critical conditions, however, fundamental data are lacking and our knowledge of many points is still very much in the twilight zone. Such a viewpoint is obvious when we pause to consider that we are dealing, not merely with a simple compound of hydrogen and oxygen, but complex chemical solutions, the composition of which is seldom accurately known. Until the recently published studies of Braidech and Emery, few chemists or engineers, to say nothing of the general public, realized that many of our municipal water supplies contain lead, fluorides, and zinc in appreciable amounts, and that nickel, silver, boron, and other metals were also detectable in a number of drinking water supplies." The presence of these elements is significant, both from the health, and the industrial standpoint.

In the lecture he described the modern methods of testing and analyzing water and its deposits including the petrographic, spectrographic and the recently developed polarographic methods. He discussed the embrittlement of boiler steel, indicating the heavy losses from this source.

Changes in Reports

The Summary of Proceedings which is enclosed with this BULLETIN gives the final action taken at the meeting on all standardization recommendations. Committee A-10 requested postponement of action on its proposed specifications for welded corrosion-resistant articles made from austenitic chromiumn-ickel steel, and Committee D-11 withdrew its proposal to adopt as standard the tentative specifications for rubber pump valves. The committee on preservative coatings recommended, which recommendation was approved, to refer to letter ballot for adoption as standard the specifications covering spirits of turpentine (D 13 – 33 T).

Entertainment Features

The Entertainment Committee was headed by J. T. MacKenzie and to him should go in no small measure credit for the very enjoyable informal dance which was held on Wednesday evening. With a number of the members' families at the meeting, the dance floor was well populated at all times.

J. H. Chubb was in charge of the A.S.T.M. annual golf tournament held on Thursday afternoon at the Seaview Golf Club. It fell to a new member, C. M. Loeb, Jr., to walk off with first honors for the day. For his low score for the course he wins possession for a year of the A.S.T.M. championship cup. Mr. Loeb discovered six new golf balls in the cup. Herbert Spencer won four matched irons for the lowest net score based on his handicap and W. M. Kinney has a new duffle bag resulting from winning the blind bogey. J. J. Crowe and W. B. Price have a new putter and No. 3 iron respectively for their prowess on the greens.

SUMMARY OF ACTIONS TAKEN AT ANNUAL MEETING AFFECTING STANDARDS AND TENTATIVE STANDARDS

	Existing Tentative Standards Adopted as Standard	Standards in Which Revisions Will Be Adopted	Proposed Standards Approved for Publication as Tentative	Proposed Revisions of Existing Standards Accepted as Tentative	Tentative Standards Revised	Total Standards Adopted	Total Tentative Standards
A. Ferrous Metals—Steel, Cast Iron, Wrought Iron, Alloys, etc	13	2	3	14	5	112	23
B. Non-Ferrous Metals—Copper, Zinc, Lead, Aluminum, Alloys, etc	3	..	3	..	6	73	21
C. Cement, Lime, Gypsum, Concrete and Clay Products	9	..	11	2	4	69	47
D. Paints, Petroleum Products, Coal, Textiles, Rubber, etc	11	10	13	5	24	230	115
E. Miscellaneous Subjects, Testing, etc	..	..	..	8	..	13	8
Sectional and Research Committees	..	..	2	..	..	1	5
Total	36	12	32	24	39	498	219

New and Revised Tentative Standards

The Society accepted at the annual meeting 32 new tentative standards and revisions of 39 existing tentative specifications and methods of test. Of the new tentative standards, 26 relate to materials not previously covered by A.S.T.M. standards while 6 are revisions of existing standards. Twelve of the 39 revised tentative specifications and test methods were extensively modified. The titles of these are included below with the list of those issued by the Society for the first time. Standing committees responsible for the various items are indicated in italics. The number of A.S.T.M. tentative standards, including those accepted at the annual meeting, now totals 219:

FERROUS METALS

Specifications for:

Class I Electric-Fusion-Welded Steel Pipe for High-Temperature and High-Pressure Service (A 155 – 34 T). *Committee A-1 on Steel.*

Black and Hot-Dipped Zinc-Coated (Galvanized) Welded and Seamless Steel Pipe for Ordinary Uses (A 120 – 34 T) (revision of tentative standard). *Committee A-1 on Steel.*

Cold-Rolled Strip Steel (A 109 – 34 T) (revision of tentative standard). *Committee A-1 on Steel.*

Wrought-Iron Plates (A 42 – 34 T) (revision of standard). *Committee A-2 on Wrought Iron.*

Method of:

Sampling Molybdenum Salts and Compounds for Metallurgical Use (A 156 – 34 T). *Committee A-9 on Ferro-Alloys.*

NON-FERROUS METALS

Specifications for:

Magnesium-Base Alloy Ingot for Remelting (B 93 – 34 T). *Committee B-7 on Light Metals and Alloys.*

Magnesium-Base Alloy Sand Castings (B 80 – 34 T) (revision of tentative standard). *Committee B-7 on Light Metals and Alloys.*

Magnesium-Base Alloy Sheet (B 90 – 34 T) (revision of tentative standard). *Committee B-7 on Light Metals and Alloys.*

Magnesium-Base Alloy Forgings (B 91 – 34 T) (revision of tentative standard). *Committee B-7 on Light Metals and Alloys.*

Magnesium-Base Alloy Die Castings (B 94 – 34 T). *Committee B-6 on Die-Cast Metals and Alloys.*

Method of:

Test for Linear Expansion of Metals (B 95 – 34 T). *Committee B-4 on Electrical-Heating, Electrical-Resistance and Electric-Furnace Alloys.*

CEMENT

Method of:

Test for Compressive Strength of Portland Cement Mortars (C 109 – 34 T). *Committee C-1 on Cement.*

LIME

Specifications for:

Quicklime for Structural Purposes (C 5 – 34 T) (revision of standard). *Committee C-7 on Lime.*

Hydrated Lime for Structural Purposes (C 6 – 34 T) (revision of standard). *Committee C-7 on Lime.*

Methods of:

Physical Test for Limestone, Quicklime and Hydrated Lime (C 110 – 34 T). *Committee C-7 on Lime.*

REFRACTORIES

Specifications for:

Ground Fire Clay (C 105 – 34 T). *Committee C-8 on Refractories.*

Refractories for Construction of Incinerators (C 106 – 34 T). *Committee C-8 on Refractories.*

Method of:

Panel Test for Resistance of Refractory Brick to Thermal and Structural Spalling (C 38 – 34 T) (revision of tentative standard). *Committee C-8 on Refractories.*

Panel Test for Resistance to Thermal and Structural Spalling of Fire-Clay Brick for Stationary Boilers and Malleable Iron Furnace Bungs (C 107 – 34 T). *Committee C-8 on Refractories.*

Chemical Analysis of Magnesite Refractories (C 18 – 34 T) (to supplement standard). *Committee C-8 on Refractories.*

Symbols and Definitions:

Symbols for Heat Transmission (C 108 – 34 T). *Committee C-8 on Refractories.*

Definitions of Terms Relating to Refractories (C 71 – 34 T) (to supplement standard). *Committee C-8 on Refractories.*

CONCRETE

Specifications for:

Sodium Silicate for Curing Concrete (C 111 – 34 T). *Committee C-9 on Concrete and Concrete Aggregates.*

Non-Reinforced Concrete Sewer Pipe (C 14 – 34 T) (revision of standard). *Committee C-13 on Concrete Pipe.*

Reinforced-Concrete Sewer Pipe (C 75 – 34 T) (revision of tentative standard). *Committee C-13 on Concrete Pipe.*

PIGMENTS AND PAINT MATERIALS

Specifications for:

Titanium Barium Pigment (D 382 – 34 T). *Committee D-1 on Preservative Coatings.*

Titanium Calcium Pigment (D 383 – 34 T). *Committee D-1 on Preservative Coatings.*

Titanium Dioxide (D 384 – 34 T). *Committee D-1 on Preservative Coatings.*

High Zinc Sulfide Lithopone (D 385 – 34 T). *Committee D-1 on Preservative Coatings.*

Zinc Sulfide (D 386 – 34 T). *Committee D-1 on Preservative Coatings.*

Amyl Acetate (from Fusel Oil) (D 318 – 34 T) (to supplement standard). *Committee D-1 on Preservative Coatings.*

Methods of Test for:

Mass Color and Tinting Strength of Dry Color Pigments or Pastes (D 387 – 34 T). *Committee D-1 on Preservative Coatings.*

Tinting Strength of White Pigments and White Pigment Pastes (D 332 – 34 T) (revision of tentative standard). *Committee D-1 on Preservative Coatings.*

COAL

Specifications for:

Classification of Coals by Rank, including the names given to the classes and groups of coals (D 388 – 34 T). *Sectional Committee M20 on Classification of Coals.*

Classification of Coals by Grade (D 389 – 34 T). *Sectional Committee M20 on Classification of Coals.*

TIMBER AND TIMBER PRESERVATIVES

Specifications for:

Timber Piles (D 25 – 34 T) (revision of tentative standard). *Committee D-7 on Timber.*

Creosote (D 390 – 34 T). *Committee D-7 on Timber.*

Creosote Coal-Tar Solution (D 391 – 34 T). *Committee D-7 on Timber.*

ELECTRICAL INSULATING MATERIALS

Methods of:

Test for Molding Powders Used in Electrical Insulation (D 392 – 34 T). *Committee D-9 on Electrical Insulating Materials.*

RUBBER PRODUCTS

Specifications for:

Insulated Wire and Cable: Class AO, 30 per cent Hevea Rubber Compound (D 27 – 34 T) (revision of tentative standard). *Committee D-11 on Rubber Products.*

Insulated Wire and Cable: Class A, 30 per cent Hevea Rubber Compound (D 393 – 34 T). *Committee D-11 on Rubber Products.*

Specifications and Tests for:

Friction Tape for General Use for Electrical Purposes (D 69 – 34 T) (revision of tentative standard). *Committee D-11 on Rubber Products.*

Methods of:

Test for Abrasion Resistance of Rubber Compounds (D 394 – 34 T). *Committee D-11 on Rubber Products.*

Test for Compression Set of Vulcanized Rubber (D 395 – 34 T). *Committee D-11 on Rubber Products.*

Appointments and Representatives

The following Society appointments and representatives are announced. On the A.S.T.M. committees involved, the term of appointment is three years.

H. F. MOORE, Professor of Engineering Materials, University of Illinois, as the American representative on the Committee on Uniformity in Calibration of Testing Machines of the International Association for Testing Materials.

J. B. RATHER, In Charge, General Laboratories, Socony-Vacuum Corp., J. C. PEARSON, Director of Research, Lehigh Portland Cement Co., and C. H. MATHEWSON, Professor of Metallurgy, Yale University, on Committee E-6 on Papers and Publications for terms of three years.

J. B. YOUNG, Engineer of Tests, Reading Company and J. O. LEECH, Assistant Metallurgical Engineer, Carnegie Steel Co., on Committee E-10 on Standards.

T. A. BOYD, Head, Fuel Section, Research Laboratories, General Motors Corp., R. L. TEMPLIN, Chief Engineer of Tests, Aluminum Co. of America, and D. E. DOUTY, President, U. S. Testing Co., on Committee E-1 on Methods of Testing.

G. B. WATERHOUSE, Professor of Metallurgy, Massachusetts Institute of Technology and L. B. TUCKERMAN, Assistant Chief, Division of Mechanics and Sound, National Bureau of Standards, on E-8 on Nomenclature and Definitions.

Publications to Be Issued During the Year

Several Special Books and Pamphlets, Including Standards Compilations, Scheduled

WITH a number of special compilations of standards, reports, and the regular publications, as well as several items which it has become customary to issue each year, on the publication schedule, a busy editorial season is in prospect.

Included in the list of special publications are the Symposium on the Outdoor Weathering of Metals and Metallic Coatings held at the Washington Regional Meeting; the report on Service Characteristics of Light Metals and Alloys; the Significance of Tests of Concrete and Concrete Aggregates; Significance of Tests for Petroleum Products and Lubricants; and the report on Quality Standards for Wrought Iron. The Marburg Lecture and the annual reports of the Corrosion Committees, A-5 and B-3, will also be published separately in addition to their inclusion in the *Proceedings*.

Committees which are sponsoring the compilation and publication in special books of the specifications, test methods, etc., which are in their jurisdiction include Committees D-2 on Petroleum Products and Lubricants, D-9 on Electrical Insulating Materials, and C-8 on Refractories. The first two named have been issued annually for a number of years. The C-8 compilation which includes the Manual on Refractory Test Data was first issued in 1932. Because these compilations of standards pertaining to a particular industry are concise and convenient, they are being used more and more widely.

Short descriptions of some of the 1934 publications are given here for the members' information.

Selected Standards for Engineering Students.—A selection of specifications and test methods, designed to aid students in their studies of materials of engineering, giving specific knowledge of specifications essential to insure quality materials and affording examples of the necessity for standardized laboratory procedure. This compilation is used in many engineering schools and colleges.

Service Characteristics of Light Metals and Alloys.—Prepared by Committee B-7 on Light Metals and Alloys to provide an accurate picture of the light metal industry. Discusses metallurgical characteristics, industrial requirements, surface protection and gives valuable data on physical and mechanical properties, composition, etc., of aluminum, magnesium and their alloys.

Significance of Tests of Petroleum Products.—A completely revised and amplified report prepared by Committee D-2 on Petroleum Products and Lubricants, giving authoritative information regarding the applicability of tests now in common use, and the significance of results obtained. The previous edition of this pamphlet was widely used and there has been great demand for a revised edition.

Quality Standards for Wrought Iron.—A report prepared by Committee A-2 on Wrought Iron containing much valuable information to the producers and users of this material. Discusses physical properties, chemical analysis, structural characteristics and factors by which quality may be judged.

Reports of Corrosion Committees.—Reprints of the annual reports of Committees A-5 on Corrosion of Iron and Steel and B-3 on Non-Ferrous Metals and Alloys, summarizing their activities and presenting extensive data and information developed by the series of important corrosion test programs.

1934 Supplement to Book of Standards.—Will give all standards adopted in 1934 and those in which revisions have been adopted. This is furnished without charge to the members and all who have purchased the 1933 Book of A.S.T.M. Standards.

1934 Book of Tentative Standards.—A compilation of all of the tentative standards of the Society, over 245, in their latest form. Although the current *Proceedings* will give the new tentative standards and revisions approved this year, the convenience of having in one place all of the A.S.T.M. tentative specifications and methods makes this book in wide demand.

Proceedings.—As customary will include the technical papers, committee reports, new and revised tentative standards, and tentative revisions in standards, presented at the 1934 annual meeting. The extensive discussions of the papers and reports add much to the value of the data given.

Effect of Sulfur on Forging Steel.—Report of the Joint Committee on Effect on Phosphorus and Sulfur in Steel, dealing with simple carbon forging steels containing residual sulfur in progressively increasing amounts.

Year Book.—Includes list of complete membership of the Society (name, address, company, etc.), the personnel of all A.S.T.M. committees, and other pertinent information. Furnished to members on request.

Edgar Marburg Lecture.—Separate copies of the 1934 Lecture on "Water as an Industrial and Engineering Material." Gives interesting information on impurities, evaluation of testing methods, prevention of caustic embrittlement of boiler steel, etc.

Combined Index to Standards.—Issued annually, will again give complete references to latest publications in which the standards and tentative standards appear. This is furnished to members and in addition is sent to those who request it.

Special Compilations of Standards

These special compilations, sponsored by the respective A.S.T.M. committees have the distinct common purpose of providing a compact, convenient reference to all Society specifications and test methods, in their latest approved form, pertaining to the industry involved.

Petroleum Products.—Contains 1934 report of Committee D-2 and the 33 standard and tentative methods of test.

Electrical Insulating Materials.—Annual report of Committee D-9, and 54 standard and tentative specifications, and test methods.

Refractories.—Contains the revised Manual on Interpretation of Refractory Test Data, the standards developed by Committee C-8, and data on the standard refractory samples, as issued by the National Bureau of Standards.

A list of all of the above publications with the prices to members and other descriptive information, will be sent in the form of an order blank to each member in September.

Meeting of the Rheology Society

Members of the A.S.T.M. have been invited to attend the meeting of the Society of Rheology at Franklin Institute, Philadelphia, October 19 and 20.

Committee Standardization Activities

A BRIEF summary of projects nearing completion and of new work undertaken by certain of the standing committees is presented below. This supplements the detailed review of committee work in the annual reports presented at the annual meeting and further indicates the extensiveness of committee standardization work.

Ferrous and Non-Ferrous Metals

The question of inspection and recommended practices for surface defects in structural steel is being considered by Committee A-1 on Steel; work has also been undertaken on specifications for concrete reinforcement bars rolled from standard car and engine axles in response to a demand for standards covering this type of concrete reinforcement. Specifications for carbon-steel and alloy-steel still tubing for refinery service are in process of development. The Steel Committee has been very active in the preparation of specifications covering materials for use at elevated temperatures and high pressures. Specifications for alloy-steel pipe and castings for service up to 1100 F., just completed, will be submitted to the Society.

Important problems under consideration by Committee A-2 on Wrought Iron include the proposed use of a "work ratio" (ratio of size of original bloom or pile to finished product) instead of the present designations of single and double refined iron, consideration of a specification for single refined iron in the manufacture of which purchased scrap of any description will not be permitted, and the manganese content of wrought-iron bars. Two specifications for wrought-iron sheets, just completed, will be presented to the Society during the year.

Committee A-3 on Cast Iron is continuing its study of test bars which will provide information for a revision of the tentative specifications for gray-iron castings. Plans are being developed for a standard impact testing machine to be used in cooperative studies from which it is hoped to prepare methods of impact testing for cast iron.

Committee B-1 on Copper Wire has under consideration a revision of the tentative specifications for hard-drawn copper transmission cable. In cooperation with the Sectional Committee on Insulated Wire and Cable, consideration will also be given to the standard specifications for bare concentric-lay copper cable. Attention will be given particularly to the construction table of these specifications which cover the area of cross-section, number and diameter of wires for the several classes of cable.

Cement, Lime, Brick, Concrete

Specifications for sulfate-resisting cements have been completed by Committee C-1 on Cement and will be submitted to the Society during the year. In this specification, attention will be called to the fact that such cements may serve those purposes where a moderately low-heat-of-hardening cement is required. Chemical methods covering the more complete analysis of cements have been completed. The determination of fineness by means of the turbidimeter has reached a stage where the committee will submit to letter ballot a method covering the use of the Wagner turbidimeter. The committee is planning to revise and adopt as standard the tentative specifications for high-early-strength portland cement. At the same time a proposed tentative specification may be available for the high-early-strength modified portland cement.

Committee C-3 on Brick is preparing an important revision of the test methods for brick to include new types of testing equipment and improvements in the test procedure. The committee is considering the inclusion of weather resistance requirements in the clay building brick specifications, the effect of de-airing on the specifications for paving brick and a revision of the sewer brick specifications.

Committee C-7 on Lime has under development specifications for hydraulic lime. Nomenclature of lime and lime products is being studied for the purpose of preparing definitions of terms used in the industry.

Among the large number of projects nearing completion by Committee C-9 on Concrete and Concrete Aggregates are an accelerated compression test of concrete, tests of vibrated concrete, procedure for the analysis of fresh concrete, a magnesium-sulfate test for soundness of aggregates, an absorption test of aggregates, method for determination of voids in coarse aggregates, specifications for light-weight aggregates, and an abrasion test for aggregates.

Committee C-13 on Concrete Pipe expects to complete during the year an important revision of the tentative specifications for reinforced-concrete culvert pipe. The committee has obtained considerable test data from the various pipe manufacturers and highway departments.

Paints, Petroleum Products

Accelerated weather tests as applied to lacquers will be concluded before the end of this year by a subcommittee of Committee D-1 on Preservative Coatings for Structural Materials, and proposed tentative specifications for woods to be employed as weather test panels will be ready in the near future. The committee is studying that physical property of materials commonly called gloss, with a view to developing a satisfactory definition, and eventually a method of test. Further studies are being made of methods for hiding power and tinting strength in an attempt to develop them to a point that will meet with general acceptance.

Committee D-2 on Petroleum Products and Lubricants has completed specifications for fuel oils covering six grades suitable for the various types of fuel-oil-burning equipment, which it expects to submit to the Society as tentative. The committee has undertaken studies of corrosion tests, methods for determining softening point and consistency of greases, improvement of the Sligh oxidation test, and flash point test for cut-back products.

Coal, Textiles

Committee D-5 on Coal and Coke is studying a method for determining the slacking properties of coal, that is, a method to measure the extent to which various coals may disintegrate when exposed to the weather. Studies are being made as to the accuracy of various methods of sampling coal and the most economical method of sampling coals containing different amounts of impurities and differing in size. Extensive coal grindability tests are being made.

Committee D-13 on Textile Materials has completed specifications for tolerances and test methods for woolen yarns and for worsted yarns, and also a method of estimating hard scoured wool in wool in grease which are shortly to be presented to the Society as tentative. Test methods for woolen floor coverings are under consideration. Three constructions of single yarn chafer fabrics have been prepared as tentative additions to the present specifications.

New Members to July 20, 1934

The following 59 members were elected from April 20 to July 20, 1934:

Company Members (16)

ALOE CO., A. S., H. L. Ettman, Manager, Laboratory Division, 1819 Olive St., St. Louis, Mo.
ALUMINUM INDUSTRIES, INC., W. J. Klayer, Metallurgist, 2416 Beekman St., Cincinnati, Ohio.
ASSOCIATION OF EDISON ILLUMINATING COS., P. S. Millar, Secretary, Eightieth St. and East End Ave., New York City.
DEWEY & ALMY CHEMICAL CO., R. R. Coghlan, Sales Engineer, 235 Harvey St., Cambridge, Mass.
FORD INSTRUMENT CO., INC., E. P. Ross, Chief Engineer, Rawson St. and Nelson Ave., Long Island City, N. Y.
GENERAL RADIO CO., R. F. Field, Engineer, 30 State St., Cambridge, Mass.
HARRISON DIVISION, GENERAL MOTORS CORP., H. E. Long, Specification Engineer, Washburn St., Lockport, N. Y.
MAGNETIC PIGMENT CO., K. E. Burgess, 601 Cass St., Trenton, N. J.
MICHIGAN STEEL CASTING CO., R. J. Wilcox, Chief Metallurgist, 1986 Guoin St., Detroit, Mich.
PAN AMERICAN REFINING CORP., R. H. Price, Chief Chemist, Texas City, Tex.
PITTSBURGH COAL CO., J. B. Morrow, Preparation Manager, Pittsburgh, Pa.
RESEARCH LABORATORY, UNITED STATES STEEL CORP., Lincoln Highway, Kearny, N. J.
SHELL UNION OIL CORP., G. A. Kramer, Assistant to Vice-President, 50 W. Fiftieth St., New York City.
THERMOSTATIC BIMETAL MANUFACTURERS ASSN., H. A. Wilson, President, 97 Chestnut St., Newark, N. J.
WALLERSTEIN LABORATORIES, P. P. Gray, Chief Chemist, 171 Madison Ave., New York City.

Individual and Other Members (42)

ANGEL, C. M., Engineer of Tests, Chesapeake & Ohio Railway Co., Huntington, W. Va.
BESOZZI, LEO, Assistant Chief Engineer, Department of Water Works, New City Hall Bldg., Hammond, Ind.
BURKET, H. D., Metallurgical Engineer, Republic Steel Corp., Buffalo, N. Y.
COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH, Librarian, 314 Albert St., East Melbourne, C. 2, Australia.
DUNNELL, W. W., JR., Chief Engineer, The Reece Button Hole Machine Co., Boston, Mass. For mail: 86 Myrtle St.
FRASER, H. M., Vice-President, International Lubricant Corp., Box 390, New Orleans, La.
GRAYBILL, K. W., Engineer, Associated Electric Labs., Inc., 1033 W. Van Buren St., Chicago, Ill.
HAMMOND, H. J., Secretary, The Super Cement Co., Buhl Bldg., Detroit, Mich.
HARVEY, W. E., Assistant Metallurgist, John A. Roebling's Sons Co., Trenton, N. J.
HONOLULU BOARD OF WATER SUPPLY, Frederick Ohrt, Manager, Honolulu, Oahu, Hawaii.
LEVERING, J. A., Treasurer, Eavenson & Levering Co., Third and Jackson Sts., Camden, N. J.
LEVI, W. W., Metallurgist, Lynchburg Foundry Co., Lynchburg, Va.
LOEB, C. M., JR., Metallurgical Engineer, Climax Molybdenum Co., 295 Madison Ave., New York City.
LOS ANGELES, COUNTY OF, ROAD DEPT., G. W. Jones, Road Commissioner, 1104 Hall of Records, Los Angeles, Calif.
MENZEL, C. A., Associate Engineer, Research Laboratory, Portland Cement Assn., 33 W. Grand Ave., Chicago, Ill.
MERENESS, H. A., Field Secretary, National Federation of Textiles, Inc., 468 Fourth Ave., New York City.
MONONOBE, NAGAHO, Director, Naimusho-Dobokushikensho (Research Office of Public Works, Home Dept.), Hongo-ku, Komagome Kamifujimae, Tokio, Japan.
MOONEY, PHILIP, Field Engineer, Medusa Portland Cement Co., Cleveland, Ohio. For mail: Box 432, Wampum, Pa.
MORGAN, EDWIN, President, Morgan Cotton Mills, Inc., Laurel Hill, N. C.
NATIONAL ECONOMIC COUNCIL OF CHINA, THE, Library of Bureau of Roads, Nanking, China.
OKLAHOMA AGRICULTURAL AND MECHANICAL COLLEGE LIBRARY, Stillwater, Okla.
OLCOTT, F. B., Member of Firm, Shirley & Olcott, 220 Mills Bldg., Washington, D. C.
PEIPING, NATIONAL LIBRARY OF, T. L. Yuan, Associate Director, 1 Wen Tsin Chieh, Peiping, China.
PERRY, H. G. B., Chief Engineer, Technical Division, Standard-Vacuum Oil Co., 11 Canton Road, Shanghai, China.
PETERSON, A. W., Metallurgist, General Plate Co., Attleboro, Mass.
PLECHNER, W. W., Director of Research, Southern Mineral Products Corp., Piney River, Va.
RATCLIFF, MARTIN, Managing Director, Ratcliffs (Great Bridge), Ltd., Great Bridge, Staffordshire, England. For mail: Kenilworth House, Leamington, England.
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Personals

News items concerning the activities of our members will be welcomed for inclusion in this column

F. M. FARMER, Vice-President, Electrical Testing Laboratories, and Past-President, A.S.T.M., has been elected a director of the American Institute of Electrical Engineers.

J. H. HERRON, President, James H. Herron Co., has been nominated a Vice-President and B. M. BRIGMAN, Dean, Speed Scientific School, University of Louisville, has been nominated a Manager of the American Society of Mechanical Engineers.

H. A. ANDERSON, Metallurgical Engineer, Western Electric Co., Inc., has been chosen as chairman of the Chicago Section of the American Society of Metals.

D. S. JACOBUS, Advisory Engineer, The Babcock & Wilcox Co., has been chosen President, J. J. CROWE, Engineer in Charge, Apparatus Research and Development Department, Air Reduction Sales Co., Vice-President, and C. A. MCCUNE, Consulting Engineer, Treasurer, of the American Welding Society.

D. E. DOUTY, former Vice-President and General Manager, United States Testing Co., Inc., was recently elected to the presidency of this organization.

ARTHUR SCHRODER, formerly with the Technical Service Department, Precision Scientific Co., is now associated with the Chicago Apparatus Co., as Director of Technical Service.

T. SMITH TAYLOR, who for a number of years was in charge of the Physical Laboratory, Bakelite Corp., and later in consulting work, has been appointed Head, Department of Physics, Washington and Jefferson College. He will continue his consulting service.

MELVIN L. ENGER, Head, Department of Theoretical and Applied Mechanics, University of Illinois, has been named Dean, College of Engineering and Director, Engineering Experiment Station, and FRED B. SEELY, Professor of Theoretical and Applied Mechanics, University of Illinois, has been made Head of this department succeeding Professor Enger.

P. J. FREEMAN, formerly Consulting Engineer, Pittsburgh Testing Lab., Pittsburgh, Pa., is now Principal Materials Engineer, Engineering Service Division, Tennessee Valley Authority, Knoxville, Tenn.

NORMAN E. WOLDMAN, formerly metallurgical engineer, Westinghouse Electric and Manufacturing Co., has opened consulting chemical and metallurgical laboratories at 10616 Euclid Ave., Cleveland, Ohio, under the name "Crystal Engineering Laboratories."